

Response to Office Action of February 28, 2005
U.S. Application No.: 10/722,553

Attorney Docket No.: FSF-03214

REMARKS

Claim 1 has been amended. Support for the amendment is found, for example, on p. 38, line 21. Accordingly, no new matter is presented. Upon entry of the amendment, claims 1-21 will be pending in the application.

I. Response to Claim Rejection under 35 U.S.C. §103

A. Fukui et al. and Tsuji

Claims 1 and 3-15 have been rejected under 35 U.S.C. § 103 (a) as being unpatentable over the combination of Fukui et al. and Tsuji.

Applicants respectfully submit that the combination of Fukui et al. and Tsuji does not disclose the photothermographic material of the claimed invention. The Examiner has admitted that Fukui et al. does not disclose the polymer disclosed in the claimed invention. In order to cure the deficiency, the Examiner has relied on the disclosure of Tsuji. The Examiner states:

"it would have been obvious to the worker of ordinary skill in the art at the time the invention was made to use the polymer latex containing the butadiene group taught in Fukui et al. including the use of the substituents known in the formation of latex taught in Tsuji with a reasonable expectation of achieving a binder with good quality such as providing the material development uniformity and rapid image form, and thereby provide an invention as claimed."

The Applicant respectfully disagrees. Tsuji does not teach what effects are produced by the methyl groups on polymer II-1 to II-9 disclosed in columns 9 and 10 of Tsuji. Column 7, lines 14 to 10 of Tsuji recites "at least one of R₁ through R₆ is -SO₃X." This suggests that -SO₃X group is essential for achieving the expected functions of the polymer of Formula (II) used in Tsuji. The importance of -SO₃X group is in consistent with the antistatic characteristic imparted by the polymer of Tsuji.

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In contrast, an alkyl group such as a methyl group is not considered essential since Formula (II) includes a formula in which at least one of R_1 through R_6 is $-\text{SO}_3\text{X}$ and the remainder is hydrogen atoms. Accordingly, a person in the art would not think the methyl groups on polymers II-1 to II-9 have a function of providing the material development uniformity and rapid image formation. Consequently, a person in the art would not be motivated to add the methyl group taught in Tsuji to the polymer taught in Fukui.

In addition, the polymers disclosed in Tsuji are water-soluble, as described in column 7, line 4 of Tsuji. The presently claimed invention uses a latex as the binder. Since the polymers of Tsuji are water-soluble, they cannot form a latex. Accordingly, the polymer of Tsuji cannot be considered equivalent to the binder of the presently claimed invention. Claim 1 has been amended to clarify this point.

Further, Tsuji has little technical relation to the field of a photothermographic material. The disclosure of Tsuji is concerned about a conventional photosensitive material which is developed with a liquid developer (column 14, lines 60-64 of Tsuji). The invention of Tsuji achieves even development upon development with a liquid developer in the presence of a nonionic surfactant (column 1, lines 40-50). In contrast, the photothermographic material of the invention is thermally developed. Since the development process is different, development evenness (upon development with a liquid developer) achieved in Tsuji does not have a technical relationship with the present invention. The present invention provides a photothermographic material with a high sensitivity and image storability as demonstrated in Examples of the present specification. Such effects are neither taught nor suggested in Tsuji. Accordingly, a person in the art would not be motivated to use the substituents disclosed in Tsuji for achieving the effects of the present invention, which are not taught in Tsuji.

Moreover, as described in column 21, lines 38-39 and Table 1 of Tsuji, the latex of Tsuji is used as an additive in an amount of 20 % by mass at most in the protective layer, and in an amount of 10 % by mass at most in the emulsion layer. However, as described in claims 1, 13, and 16 of the present application, the polymer of the present invention is used as the binder. Accordingly, a person would not expect the effect achieved by the present invention based on the disclosure of Tsuji because the polymer is used in different ways.

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Because the combination of Fukui et al. and Tsuji does not teach nor suggest the photothermographic material of the present invention, the withdrawal of the rejection is respectfully requested.

B. Fukui et al. and Tsuji, in view of either Ezoe or Goto

Claim 2 has been rejected under 35 U.S.C. § 103 (a) as being unpatentable over Fukui et al. and Tsuji, in view of either Ezoe or Goto Ohzeki et al. The withdrawal of the rejection is respectfully requested for the reasons set out above because of its dependency.

C. Fukui et al., Tsuji, and Encyclopedia of Chemical Technology, Forth Edition

Claims 16-21 have been rejected under 35 U.S.C. § 103 (a) as being unpatentable over Fukui et al., Tsuji, and Encyclopedia of Chemical Technology, Forth Edition. The Examiner has relied on the combination of Fukui et al. and Tsuji for explaining how a person in the art is motivated to use the polymer of the invention. However, the combination of Fukui et al. and Tsuji neither teaches nor suggests the polymer of the invention as described in the above item A. Encyclopedia of Chemical Technology, Fourth Edition cannot cure the deficiency since it does not teach the polymer of the invention. Therefore, the combination of Fukui et al., Tsuji, and Encyclopedia of Chemical Technology, Forth Edition neither teaches nor suggests the presently claimed invention.

Accordingly, withdrawal of the rejection is respectfully requested.

II. Response to Provisional Double Patenting Rejections

A. Copending Application No. 10/724,706

Claims 1 and 3-13 have been rejected under obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 10/724,706 in view of Fukui et al. Although the Applicant does not agree with the rejection, the Applicant hereby submits a Terminal Disclaimer with respect to Application 10/724,706. Accordingly, the rejection has been overcome.

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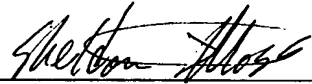
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B. Copending Application No. 10/724,706

Claims 13-21 have been rejected under obviousness-type double patenting as being unpatentable over claims 1-18 of copending Application No. 10/724,706. Although the Applicant does not agree with the rejection, the Applicant hereby submits a Terminal Disclaimer with respect to Application 10/724,706. Accordingly, the rejection has been overcome.

In view of the foregoing remarks, it is submitted that all of the claims currently pending in the application are in condition for allowance. Early and favorable action is respectfully requested.

Respectfully submitted,



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